

Progressive Watermark Decoding on a Distributed Computing Platform

Abstract of the Disclosure

The disclosure describes a method of progressively decoding a digital watermark
5 on a distributed computing platform. A client device equipped with a digital camera,
such as a PDA or cell phone, captures a digital image of a watermarked object, and pre-
filters the image to isolate a portion of the image data suspected of containing a digital
watermark. The pre-filter de-correlates a portion of the image data suspected of
10 containing a digital watermark from the remaining host image signal using a predictive
filter. The client then quantizes the filtered data and progressively transmits the
quantized data to a watermark decoder. The progressive transmitter sends image data as
necessary to achieve a valid decoding operation. To reduce bandwidth requirements, the
transmitter starts with the most highly quantized version of the filtered image, and sends
15 lesser quantized versions until the watermark decoder completes a successful decoding
operation.